NO 13

Menstruation.

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On Menstruation

Menstruation, or in other words, the periodical discharge of a fluid which takes place in women at, and after the age of puberty, has furnished matter for discussion among the medical world since the days of Hippocrates, and has given rise to theories of the most opposite and diversified nature, with a view of arriving at some plausible certainty as to its nature and dependance. But such appears to have been the difficulty in question, that until late years no one theory was advanced which could stand the test of criticism, and the subject so far from being elucidated, was rather obscured by the numberless difficulties which each succeeding theory suggested in regard to the other. Notwithstanding this discrepancy of opinion however and the consequent embarrassment to which it led. The mind of the vigilent Physiologist was too much awakened to its importance as a discovery to suffer it to languish and these difficulties themselves have operated as counteragents to despair by furnishing a proper stimulus to exertion.

Influenced by such feelings, and aided by the lights of

dissections, can we doubt, with the genius and talent which adorn our profession in every age, that time will unfold to us the greatest mysteries of our nature and open to our imagi=nations those wonders which an all wise Creator has most pro=bably not destined to concealment?

It is my design here to commence with an account of the phenomena which take place in this discharge, after which I shall notice all the older theories which have been framed to account for them, and lastly, advance the most mo=dern opinions on the same

The Menses are so named from the circumstance of their occurring every month, and when the woman is in a healthy condition are marked by a minute periodical observance. Whilst this discharge continues the woman is said to be out of order or unwell.

This discharge always denotes the age of puberty, and in some instances comes on without any previous or attendant indisposition but in most cases it is preceded by uneasy feelings, very often by affections of the stomach and bowels, pain about the back and pelvis, and various

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hysterical symptoms. These affections which are more or less urgent in different individuals gradually abate; but at the end of a month come on with more severity attended with colic pains, quick pulse, sometimes hot skin and desire to vomit. There now takes place from the vagina a discharge of a serus fluid slightly red which continues the same for several periods, until at length it assumes the appearance of blood. When the discharge flows the symptoms abate; but frequently a considerable degree of weakness remains and a dark circle surrounds the eye. When a girl begins to menstruate certain changes take place denoting the age of puberty. The uterus becomes more expanded and receives its adult form; the vagina enlarges, the mons veneris swells up and is covered with hair. the pelvis is enlarged, the glandular substance of the breasts is unfolded and the cellular part increased at the same time the mental powers become stronger and new passions begin to operate on the female heart. — Dr Burns

The age of puberty differs not only in different women, but is also influenced very much by climate; Thus in very warm

climates, as for instance Asia, the menses make their appearance as early as the ninth year, and it appears to be a law of nature that the earlier they occur in life, the sooner do they take their final leave; hence women in Asia are old and infirm, while those in Europe and this country are in the prime and vigour of life.

In this as in all other temperate climates the most common age at which the menses appear is that of thirteen or fourteen, and the period of life when they cease is about forty-four. The quantity of the discharge varies also according to the climate and constitution of the woman. In this country from four to six ounces are lost at each menstrual period the continuance of which is generally from three to four days; but in women who live luxuriously and are confined in warm apartments it is more copious and continues for a much longer period.

It appears to have been the opinion of all writers on the subject of Menstruation, that the fluid ejected per vaginam was of a sanguineous kind differing in some respects from common blood; thus Hippocrates

declares it to be when in a healthy condition "Blood of the purest kind, resembling that flowing from the veins of a sacrifice newly slain." It is sometimes however so vitiated as to be almost ranked with the poisons. This, tho' he ascribes to no ill quality of its own, but the mixture of some filth or contagion otherwise contracted. It was also supposed at one time to be endowed with the most deleterious properties, fatal both to animal and vegetable life. Thus a menstruating woman was looked upon as a complete scourge to catapillars and other insects, in somuch, that merely walking over ground infested with these animals was sufficient to exterminate them; Gardeners were extremely cautious in admitting a woman within their grounds least their flowers should fade and their seeds be blasted; Vintagers, were in like manner careful least their casks should be put in fermentation, and many other absurdities of like nature which in the present state of our science bid defiance to any thing like truth or

the semblance of reason.

In investigating the subject of Menstruation, some have assigned a final and others an efficient cause.

The final cause was supposed to be either to render women more apt for conception; or to afford nutriment to the Fœtus in utero.

In support of the first, it is argued. That the blood being purged from any filth or dregs might more forcibly excite the woman to coition and also more happily prepare her for receiving the seed. Althe supported by arguments by no means satisfactory, I conceive the cause assigned perfectly consistent with reason.

That Menstruation has an agency in promoting conception is pretty obvious from the well known fact that in suppression of the menses arising from any cause whatever, pregnancy can not be induced. It is a fact quite as well established, that impregnation is much more readily effected, immediately after a menstruous course than before it; hence women in dating the period of their pregnancy reckon from the termination of

the first menstruous period. It is further attested that in some anomalous cases, when the menses have reappeared in women very far advanced in life that impregnation has been the consequence.
Dr Dewees mentions a case in his lectures, which came under his own observation of an old maid who had a vesilation of this kind when she was 65 years of age. She herself was ignorant of the cause of her uncommon and inordinate desires, altho' her washerwoman had been more observant; after the lapse of nine months however she was made sensible of the fact by the birth of a bouncing boy. Among those who support the latter of these final causes Viz: That the menstruous blood is for the purpose of affording nourishment to the Fœtus; is Galen whose name stands conspicuous in the annals of medicine. His opinions here, strike me as being perfectly consistent with the facts which present themselves.
We know that the menses entirely disappear after conception. What then becomes of them? For reasons which are certainly plausible enough, it has been thought that they

are employed in the formation of the decidua. But after this is formed, should we not then expect a return of this discharge, or can it be said that the whole of it is necessary to the gradual development of this membrane? As an additional cause for the suppression of menses during utero-gestation, it is said that the surfaces of the uterus are impinged upon by the gradual enlargement of the Fœtus; This is very ingenious certainly: But a question still arises in my mind whether the uterus as a healthy gland (which we shall hereafter prove it to be) would not even perform its functions under these circumstances, unless the arteries which supplied it were otherwise engaged.

We are told that in cases of complete inversion of the uterus when the woman does recover, that she goes on menstruating with periodical exactness notwithstanding this unnatural derangement of the parts.

If this be true, I think it will be difficult to say how the suspension of this fluid can be effected by an evil comparatively so much less.

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The least exceptionable opinion, in my mind, on this subject is; That the arteries which supplied this secretion to the uterus before conception, are now engaged in furnishing nourishment to the embryo through the medium of the placenta and Umbilicus.

That the Fœtus is nourished through the medium of the umbilicus is rendered extremely probable from the accounts we have of monstrous births without heads, and some infants who have had no passage at the mouth and nose, and therefore could not have been nourished by the liquor amnii as has been supposed. There is another circumstance which greatly strengthens the idea, that the menses have an agency in some way or other ~~of~~ in giving nourishment to the Fœtus.

It is I believe generally conceded that during the period of lactation there is a suspension of this discharge, and that as soon as the child is weaned, it returns again with all its former regularity. In some cases however women menstruate during this period; whenever this is the case the child is found to dwindle and not derive much benefit from its milk.

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Many are the theories which have been framed to account for the efficient causes of Menstruation. The one I shall first speak of is that which attributes it to the influence of the moon. This theory was countenanced by Dr Darwin. It was supposed that the period of this flux answered the moons course, and therefore that it was directed by its influence. This has been very correctly answered; that if the moon influenced this flux, all women in the same climate, of the same age & constitution, would have their menses in the same time and at the same season, which is certainly incorrect.

The Chemists in ascribing a cause to menstruation declare it to be a fermentation, which some of them contended to be diffused throughout the whole mass of blood, while others, apert that it is peculiar to the Uterus. They all agree however however that this ferment is seated in some certain salts which by their motion so agitate the mass of blood that at some certain seasons, namely every month it is thrown into a violent effervescence and seeks a passage through the

uterine vessels. This carries so much absurdity with it as scarcely to deserve a comment. I shall only observe that such a condition of things would not only produce a diseased state of the fluids affected; but also of the uterus itself, and the menses are known to be a healthy process. — Brown refers it entirely to the lascivious state which he thinks is incident to the female mind about the age of puberty, and instances have been adduced to show the agency of the imagination in producing this discharge; but this is offering too great an outrage to the purenes and delicacy of feeling which characterizes the sex. He must have been wanting in experience and observation, if he were ignorant that any strong and sudden impression made upon the mind as joy, grief, astonishment, fear &c, operate as deobstruents in this disease, and the cases on which he founded his theory were probably nothing more than the influence of one of these feelings. There is an interesting case illustrative of this fact, related by Dr Dewees. A young lady of this city, who had been afflicted for some length of time with suppression of

the menses, after baffling the skill of some of the ~~most eminent~~ physicians was at length sent into the Country - walking through an orchard she stooped down to take up a piece of rock to knock down an apple; upon removing it she found a snake and (as was very natural to one so unaccustomed to the sight of this unpleasant animal) became excessively frightened. Her Menses which had resisted the persuasion of the best remedies for so long a time, immediately began to flow and ever afterwards observed its periodical regularity - Is it to be supposed that the appearance of this loathsome creature could excite in this young lady's breast any thing like lascivious ideas!!

Cullen also endeavoured to account for it by his Theory of Local Congestion. He argued, that the upper extremities as being most essential in the economy of life were first completed, that afterwards viz: about the age of puberty, the blood was determined to the lower extremities; that the uterus being thus stimulated made an effort to throw off its burden by what he stiles an hemorrhagic effort.

These Theories I believe for want of facts to support them are nearly exploded

The last of these Theories I shall mention is that of Galen who attributes the efficient cause of Menstruation to plethora. He says, that nature causes an evacuation in all women by throwing off every month the superfluous blood. That the female sex in as much as they heap up a greater quantity of humors by living continually at home and not being used to hard labour or exposed to the heat of the sun, receive a discharge of this fullness as a remedy of nature

Many have been the advocates to this doctrine both of the ancient and modern schools, and many have been the arguments in support of its plausibility.

Dr Friend in his work on Emmenologia speaks of it as the only rational manner of explaining the phenomena, and no doubt speaks the language of all his cotemporaries.

He lays down two general principles from which he draws his deductions. First: That every body remains the same if the Evacuation be equal to the addition and visa versa Secondly: That if any eruption of Blood happen to any animal periodically and the same state should return after the Eruption as existed at the commencement of the period

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so that the animal be neither more or less ponderous; that then a plethora must have existed in that animal before the eruption, and further that all evacuations made before the eruption were unequal to the addition but equal to it if taken in conjunction with the periodical flux.

But how will the application of these principles answer in cases of men, in whom it must be confessed the very same state of things exists, without the kindly interference of a periodical evacuation? This question he appears to have anticipated, by attempting to prove that the secretions in women are less than those in men; that the secretion of persperation which he contends to consume more of the aliment than any other; is so much less in women than in men in consequence of the difference in their habits and occupations as to produce plethora. How then let me ask, does he account for the appearance of this discharge in women who are employd as Cooks and those whose avocations lead them to the most active life, where it must be confessed, perspiration flows with the same profuseness as in men, without causing any diminution in the menstrual

evacuations? Or in cases of men who lead sedentary lives or who inhabit cold climates where perspiration is not easily induced. Must it not follow that the same plethora must exist in them, which would call upon nature for the same mode of relief? This I believe is not found to be the case. If as he asserts, plethora is to be detected in women by its pondus how is he to discover it in women who are very spare and delicate, in whom it is observed that the flow is more profuse than in those of a more robust habit.

It is difficult indeed to reconcile these facts with the doctrine of plethora. It is therefore nothing more than a rational conjecture, that since the observations of medical men have opened our eyes to a new and unauthorized function which is assigned to this viscus, that this as well as all other opinions founded upon false premises would loose in oblivion all, save a respect for the talent & ingenuity which gave them birth.

I am now to take a different view of the subject and speak of the Uterus as a highly finished & well organized gland, and this much debated fluid nothing

Mr Hunter was the first I believe in England.
Haller however has the claim of priority in this discovery

more than a simple secretion. Who was entitled to the credit of this discovery is I believe not correctly known. Mr John Hunter was certainly among the first and to him I believe it is generally attributed.

I must here take the liberty of extracting from the work of our very ingenious and learned professor Dr Chapman the remarks he makes on the subject by which means I shall feel an assurance that ample justice is done it.

"It is not my intention to enter into a formal exposition or defence of the doctrine of Secretion My object at present is merely to bring forward a summary of the leading arguments by which it is maintained 1st That the uterus in its villous and vascular structure resembles a gland, and also in its diseases, being equally liable to scirrus and cancer &c. 2dly. That like other secreting organs blood is very copiously diffused through it. 3dly. That by the arrangement of its vessels it is evidently designed, that the circulation should be retarded for the purpose of secretion. The arteries are not only

exceedingly convoluted, but they are larger, and with thinner coats than their corresponding veins. The "Blood", says Haller is brought to the womb in greater quantity and more quickly through its lax and ample arteries, and, on account of the rigidity and narrowness of the veins it returns with difficulty" — 4th. That in common with other secretions menstruation is often at first imperfectly performed, and is subject afterwards to vitiation and derangement. In the beginning the discharge is generally thin, colourless, and deficient, and recurs at protracted and irregular intervals, being analogous in some of these particulars to the seminal secretion.

5th — That in many of the inferior animals during the season of incalescence, there is an uterine effusion, undoubtedly a secretion which answers seemingly, the same as menstruation, namely, giving to the uterus an aptitude to conception, and though this fluid usually differs from the menses in complexion, it is in some instances precisely similar.

Whenever the venereal desire suffers a violent exacerbation from restraint or other causes the discharge in these animals becomes red as has been more particularly remarked

in bitches kept from the male. 6. That when the menses are suppressed, they can not be restored by inducing plethora, nor the flow checked by venesection or any other means of depletion, besides which no vicarious discharge relieves the symptoms of suppression. Lastly — That the menses are a fluid sui generis, or at least, varying very essentially from blood, having neither its colour, nor odour, nor coagulability, and on chemical analysis present different results.

To the objection which has sometimes been urged, that the uterus is not sufficiently glandular for the office alleged, it may be very satisfactorily replied, that there is hardly a viscus, or surface of the body, which is not competent to this purpose. It would really seem that no operation of the animal economy requires a less complex apparatus. Of what indeed does a gland consist, except a congeries of vessels? Even the most perfect of the secretions are accomplished by this ~~simple~~ simple contrivance. If the few vessels creeping through the coats of the stomach can secrete the gastric liquor

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Why may not the infinitely more glandular organization of the uterus elaborate the menstrual fluid?

As yet we know of no glandular structure in vegetables. They contain only tubes or vessels through which the fluids circulate. Notwithstanding, however, the want of glands we find the sap of plants converted into oil, mucilage, acids &c: Than this surely no stronger proof can be required, of the extreme simplicity of the organs, by which the secretory transformations are effected